

Appln No. 10/070,077

Amdt date May 26, 2004

Reply to Office action of February 26, 2004

Amendments to the Specification:

Please amend the paragraph starting on page 4, line 5 as follows:

The output of the transducer 12 is fed to a calibration unit 14. The calibration unit has an adjustable input 16 which can be set to the nominal number of 360° twists that the twisting assembly induces per unit length of the cable. The frequency f_{ref} of the output signal of the calibration unit is thus arranged to equal nominal rate or frequency at which the conductors turn about each other (the twist frequency) as they pass over the wheel 6.

Please amend the paragraphs starting on page 6, line 11 to page 6, line 16 as follows:

A filter 50 is connected to receive the output from the detector ~~[[44]]~~ 42 and passes a signal having a frequency over a specific range.

A filter 52, similar to the filter 50, is connected to receive the output of the photo-detector 48. A phase comparator 54 is connected to the outputs of the two filters ~~[[44]]~~ 50 and ~~[[48]]~~ 52 and provides a phase difference or error signal at an output terminal 56.

Please amend the paragraph starting on page 6, line 21 as follows:

In operation, as the twisted cable passes between respective pairs of slots 34A, 38A and 34B and 38B, it will

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present a varying profile and so the shadow it casts on respective photo-detectors [[44]] 42 and 48, will vary in a generally sinusoidal manner. The output signal from the detectors will thus include a selected frequency component related to the speed of the cable, assuming the twist rate remains constant. Any variation in the twist rate will manifest itself in a phase change in selected frequency components in the outputs of the two detectors [[44]] 42 and 48.